

The flowchart illustrates the automatic changeover process for a multi-processor system, involving two main processors: the Master Processor (MP) and the Slave Processor (CP). The process is divided into several stages, each with specific tasks and decision points.

Stage S4: Initial Setup and Request Handling

- AUTOMATIC MP CHANGE PROCESS:**
 - RECEIVE VERSION HISTORY REQUEST
 - RESPOND VERSION HISTORY (RvRi)
 - RECEIVE START UP VERSION REQUEST
 - RESPOND START UP VERSION (KvKi)
- AUTOMATIC CP CHANGE PROCESS:**
 - REQUEST VERSION HISTORY
 - GET VERSION HISTORY (RvRi → MP(R))
 - REQUEST START UP VERSION
 - GET START UP VERSION (KvKi → MP(K))
 - SET VERSION HISTORY (RvRi → CP(R))
 - SET START UP VERSION (KvKi → CP(K))

Stage S4-1: Level Up/Down Determination Process

- INITIALIZE MP(K), MP(M)
- Decision: $MP(R) > MP(K)$
 - If Yes (Y): Proceed to Level Up Version Initialize.
 - If No (N): Proceed to Version Data Get Process.
- Decision: $CP(R) > CP(K)$
 - If Yes (Y): Proceed to Level Up Version Initialize.
 - If No (N): Proceed to Version Data Get Process.

Stage S4-2: Level Up Process

- INITIALIZE MP(K), MP(M)

Stage S4-3: Version Data Get Process

- REQUEST MECHCON VERSION
- GET MECHCON VERSION (MvMI → MP(M))
- REQUEST SUPPORT VERSION
- GET SUPPORT VERSION (cvcl → MP(c))
- SET CONTROLLER VERSION (CvCI → CP(C))
- SET SUPPORT VERSION (mvml → CP(m))

Stage S4-4: Version Data Response Process

- RECEIVE MECHCON VERSION REQUEST
- RESPOND MECHCON VERSION (MvMI)
- RECEIVE SUPPORT VERSION REQUEST
- RESPOND SUPPORT VERSION (cvcl)

Stage S4-5: Compatibility Verification Process

- Decision: $CP(C) \geq MP(c)$
 - If Yes (Y): Proceed to Level Down Process.
 - If No (N): Proceed to Level Up Version Initialize.
- Decision: $MP(M) \geq CP(m)$
 - If Yes (Y): Proceed to Level Down Process.
 - If No (N): Proceed to Level Up Version Initialize.

Stage S4-6: Level Down Process

- Decision: $MI = 01$
 - If Yes (Y): $Mv = -1$
 - If No (N): $MI = -1$
- Calculation: $MP(M) = MvMI$

Stage S4-7: Level Down Process (CP Side)

- Decision: $CI = 01$
 - If Yes (Y): $Cv = -1$
 - If No (N): $CI = -1$
- Calculation: $CP(C) = CvCI$

The flowchart shows a complex sequence of requests, responses, and decisions, ultimately leading to the initialization of the new master processor or the completion of the changeover process.